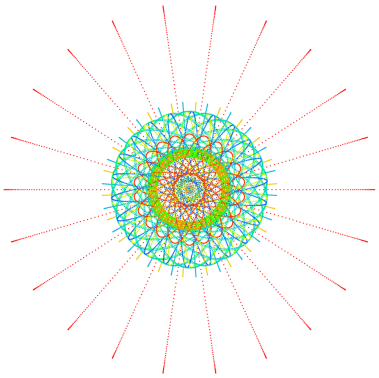
MATH AND THE CREATIVE PROCESS:

A PARTICIPATORY EXPLORATION OF NUMBER THEORY



*Offered Spring 2022 as Math 199

*10-11:50 Mon/Wed

*4 credits, counts as 2 math labs toward math major

This course will immerse students in creative, abstract problem-solving, with an emphasis on developing skills to explore and communicate about pure mathematics. Through collaborative exercises and computational projects, students will learn to make conjectures, formulate questions, and discover patterns, with a focus on topics in number theory. This course will focus on the process of doing mathematics, while also jumpstarting students' exploration of topics arising in research in number theory, e.g. factorization, prime numbers, and roots of polynomials. The course will culminate in a final project through which students will produce visualizations that will be exhibited broadly to non-experts (like the work students from the 2020 version of this course contributed to the Creativity Counts exhibit at https://jsma.uoregon.edu/CreativityCounts).

Students in this course can expect to be pushed out of their comfort zones and approach mathematics in new ways. They should be prepared to participate in active exercises (e.g. adapted from the arts, including improvisational theater exercises focused on developing communication, observation, and collaboration skills). Except to fill in necessary background, this course will not be lecture-based and instead will require students to be active during class. Skills developed in this course will be useful in any further mathematical studies, both coursework and research.

Questions? See http://pages.uoregon.edu/eeischen/CreativityCounts/
or email Prof. Eischen at eeischen@uoregon.edu